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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,888	07/20/2006	Gerhard Doering	GK-ZEI-3307/500343.20328	2002

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REED SMITH, LLP  
ATTN: PATENT RECORDS DEPARTMENT  
599 LEXINGTON AVENUE, 29TH FLOOR  
NEW YORK, NY 10022-7650

EXAMINER
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GREECE, JAMES R

ART UNIT	PAPER NUMBER
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2873

MAIL DATE	DELIVERY MODE
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09/28/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/586,888	<b>Applicant(s)</b> DOERING ET AL.	
	<b>Examiner</b> James R. Greece	<b>Art Unit</b> 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 July 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/20/2006</u> . | 6) <input type="checkbox"/> Other: _____  |

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***Detailed Action***

Applicant cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Status of the Application***

Claims 1-12 are pending in this application

If the applicant is aware of any prior art or any other co-pending application not already of record, he/she is reminded of his/her duty under 37 CFR 1.56 to disclose the same.

***Drawings***

There are no objections to the applicant's drawings at this time.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 13-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Tuchman (USPAT 6,466,353).

In regard to claim 13, Tuchman teaches:

A mounting unit which is provided with a diaphragm aperture; (numerals 14 and 24) a stepper motor which is mounted at the mounting unit; and (numerals 10 and 14) a shutter element which is connected to the motor shaft of the stepper motor for opening and closing the diaphragm aperture; (numeral 22 and col.2, lines 57-61) said stepper motor being a two-phase stepper motor with a large full step angle; said two-phase stepper motor being connected to a

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control unit and carrying out the required movement of the shutter element at a short distance from the motor shaft (col. 4, lines 20-25)

In regard to claim 14, Tuchman teaches:

Optical shutter according to claim 1, wherein a two-phase stepper motor with a claw-pole construction of the rotor and stator is used (see figs 4-8)

In regard to claim 15, Tuchman teaches:

Wherein the movement of the shutter element is limited to a movement range of less than  $n$  full steps by a stop pin in the two end positions, respectively. (See col. 3, lines 26-32)

In regard to claim 16, Tuchman teaches:

Wherein an end-position sensor, which is fastened to the mounting unit and determines the position of the shutter element, is provided in addition. (See col. 5, lines 13-16)

In regard to claim 17, Tuchman teaches:

Carrying out movement of the shutter element fastened to the motor shaft in that the  $180^\circ$  rotation of the electromagnetic field in the stator of the stepper motor, and, therefore, a corresponding rotation of the motor shaft by  $n$  full steps, is carried out by the control unit (See figure 9 and col. 3, lines 51-65)

In regard to claim 18, Tuchman teaches:

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Wherein a reversal of the current direction in the two windings of the stepper motor is carried out by the control unit for moving the shutter element that is fastened to the motor shaft (see col. 3, lines 57-67 and col. 4 lines 1-5)

In regard to claim 19, Tuchman teaches:

Wherein a retarded reversal of the current direction in the individual windings of the stepper motor is carried out by the control unit for directed movement of the shutter element (see col. 4, lines 1-11).

In regard to claim 20, Tuchman teaches:

Wherein a simultaneous reversal of the current direction in the individual windings of the stepper motor is carried out by the control unit for the directed movement of the shutter element when the mechanical rotation of the rotor is limited by stop pins to a movement range less than n full steps. (Col. 3, lines 26-32 & 57-67 and col. 4 lines 1-11)

In regard to claim 21, Tuchman teaches:

Wherein the winding currents of the individual windings of the stepper motor are reduced after reaching the end position of the shutter element, wherein the end position is reached after n full steps or when one of the stop pins is contacted. (See col. 4, lines 12-45)

In regard to claim 22, Tuchman teaches:

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Wherein the winding currents of the individual windings of the stepper motor are switched off, respectively, after the end position of the shutter element is reached when the self-holding torque of the stepper motor is large enough to hold the shutter element in the respective end position.

(See col. 4, lines 12-45)

In regard to claim 23, Tuchman teaches:

Wherein the closing of the diaphragm aperture by the shutter element is ensured when the optical device is put into operation by evaluating the signal of the end-position sensor. (See col. 5, lines 13-16)

In regard to claim 24, Tuchman teaches:

Wherein the windings of the stepper motor are acted upon by a predetermined current direction when the optical device is put into operation in order to ensure that the diaphragm opening is closed by the shutter element (see col. 3, lines 57-67 and col. 4 lines 1-11)

### *Conclusion*

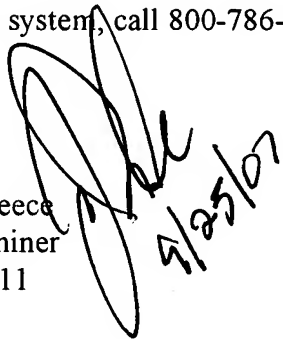
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James R. Greece whose telephone number is 571-272-3711. The examiner can normally be reached on M-Th 7:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

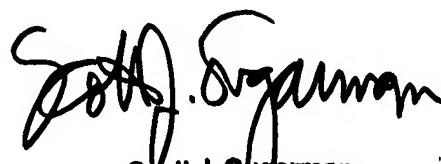
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James R. Greece  
Patent Examiner  
571-272-3711



5/25/07



Scott J. Sugarman  
Primary Examiner